

Appl. No.: 10/649,750
Amdt. dated 07/14/2005
Reply to Office Action of 05/17/2005

REMARKS/ARGUMENTS

In the Office Action dated May 17, 2005, Claims 1-35 are pending, of which Claims 1, 9, 17, and 29 are independent. Claims 29-35 have been allowed. Claims 1-4 and 6-8 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2004/0230352 to Monroe. In addition, Claim 1 has been objected to. The remaining Claims 5 and 9-28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Monroe in view of Applicant Admitted Prior Art.

Claims 1, 9, and 17 are amended above. Claim 8 is cancelled, and new Claim 36 is added. Applicant respectfully submits that the claims, as amended, are allowable for the reasons set forth below.

First, with regard to the objection of Claim 1, the Office Action states that "the communication network" recited therein lacks antecedent basis. Applicant respectfully traverses. Claim 1 is directed to an expansion module that is configured to be disposed between an avionic device connector of an avionic device and a corresponding aircraft connector of an aircraft "for providing a plurality of electrical junctions between the avionic device and the aircraft for electrical transmissions therebetween and communicating a signal representative of at least one of the electrical transmissions therefrom to a communication network." Thus, Claim 1 clearly sets forth a communication network, which is later referred to in Claim 1. Accordingly, withdrawal of the rejection is requested.

Applicant now addresses the rejection under 35 U.S.C. § 102 of independent Claim 1 and dependent Claims 2-4 and 6-8 as being anticipated by Monroe. As noted immediately above, Claim 1 (which has been amended to substantially incorporate the feature previously set forth in dependent Claim 8) is directed to an expansion module disposed between an avionic device connector and an aircraft connector "for providing a plurality of electrical junctions between the avionic device and the aircraft for electrical transmissions therebetween." In particular, the expansion module includes first and second connectors, each of which has a plurality of electrical terminals configured to engage and electrically connect to the aircraft connector and the avionic device connector, respectively. The expansion module also includes an electrical

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circuit that defines a plurality of electrical junctions between the electrical terminals of the first and second connectors for connecting the aircraft connector and the avionic device. In particular, the circuit is configured to transmit the electrical transmissions between the avionic device and the aircraft without substantially modifying the transmissions. In addition, the circuit is configured to generate and communicate a signal representative of at least one of the electrical transmissions between the avionic device and the aircraft to the communication network. Thus, as described in the specification of the present application, the device can be used, e.g., to retrofit an aircraft by replacing a conventional connector and/or tray to provide the additional capability of communicating with the communication network without substantially changing or interfering with the transmissions between the avionic device and the aircraft and requiring requalification or recertification of the avionic device.

Monroe, which is directed to a "Record and playback system for aircraft," discloses a system in which multiple data and images are multiplexed and sequenced in order to minimize the recording and monitoring hardware required to process the images. *See Abstract*. The Office Action states that Monroe teaches a device that can be:

"disposed between an avionic device connector (105) of an avionic device (10) and a corresponding aircraft connector (26) of an aircraft for providing a plurality of electrical junctions between the avionic device and the aircraft for electrical transmissions therebetween and communicating a signal representative (for example, video) of at least one of the electrical transmissions therefrom to a communication network (see fig. 7)."

Office Action, pages 2-3. However, the device of Monroe is not configured to perform the dual functions set forth in Claim 1, i.e., to transmit electrical transmissions between the avionic device and the aircraft without substantially modifying the transmissions, and generate and communicate a signal representative of at least one of the electrical transmissions between the avionic device and the aircraft to the communication network. Indeed, even to the extent that the device of Monroe does generate and communicate a signal to a communication network based on electrical transmissions, the device does not also provide the substantially unmodified electrical transmissions (of which the generated signal is representative) between the avionic device and the aircraft. Instead, Monroe states that in the embodiment in which data is recorded from

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conventional Flight Data Acquisition & Management System (FDAMS) as illustrated in Figure 7, Digital Flight Data Acquisition Unit (DFDAU), and Aircraft Condition Monitoring System (ACMS), these "conventional systems would be interfaced with the I/P Flight Data Recorded of this invention utilizing I/P (Internet Protocol)," i.e., the same protocol as used by the recorder. See Paragraph 14. There is no indication that the device transmits unmodified electrical transmissions and also generates and communicates a representative signal as claimed.

Accordingly Applicant submits that Claim 1 is allowable, as are each of Claims 2-7, which depend therefrom. In addition, the dependent claims provide other significant bases of distinction over Monroe. For example, Claim 2 recites that "the electrical terminals of the second connector are structured to correspond to the electrical terminals of the first connector such that the expansion module is configured to be disposed between the corresponding avionic device connector and aircraft connector." That is, as shown in Figure 2, the device can be disposed serially between corresponding avionic and aircraft connectors, e.g., in a retrofit. Monroe does not provide any such teaching or suggestion and, further, does not disclose any motivation for such structural correspondence. Regarding Claim 7, Monroe does not teach or suggest that "the expansion module is configured to provide the electrical junctions for the electrical transmissions between the avionic device and the aircraft when the electrical circuit is not powered."

Applicant now addresses the rejection of Claim 9, which is directed to an apparatus for receiving an avionic device on an aircraft and providing a plurality of electrical junctions between an avionic device connector of the avionic device and an aircraft connector of the aircraft for electrical transmissions therebetween. The device includes a tray configured to receive the avionic device and secure the avionic device to the aircraft and an expansion module that is structured to be received by the tray. The expansion module includes first and second connectors, which are directed in first and second opposite directions, respectively. The first connector is configured to mechanically engage and thereby electrically connect to the aircraft connector, and the second connector is configured to mechanically engage and thereby electrically connect to the avionic device connector when the avionic device is received by the tray. Further, the expansion module is received by the tray such that the connectors are disposed

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between the avionic device connector and the aircraft connector and the expansion module connects the avionic device and the aircraft when the avionic device is received by the tray and thereby secured to the aircraft. Thus, the tray can be disposed between an avionic device and an aircraft connector that were previously directly connected. That is, e.g., in a retrofit of an aircraft, an avionic device and an aircraft connector (as shown in Figure 1A) can be disconnected, and the apparatus of Claim 9 can be interposed therebetween (see Figure 2) to complete the connection while also providing the additional feature of communicating with a network.

Monroe does not teach or suggest an expansion module with connectors directed in opposite directions so that the connectors can be disposed between an avionic device connector and an aircraft connector. To the contrary, Monroe does not even describe a particular configuration for a connection between the support housing 18, which is asserted in the Office Action to correspond to the claimed expansion module, and the assembly 10, which is asserted in the Office Action to correspond to the claimed avionic device. Nor does Monroe teach or suggest that the connection therebetween has any relationship to the connection between the support housing and the other components of the system. Indeed, since Monroe proposes the addition of both the assembly 10 and the support housing 18, it is unclear why the connection therebetween would be designed to have any specific relationship to the other connections, as taught in the present application for retrofitting an aircraft but using the same avionic devices.

Regarding generally the cited "Applicant Admitted Prior Art (AAPA)," Applicant notes that the tray illustrated in Figure 1A of the present invention does not include an expansion module or multiple serial connections. That is, the tray is merely configured to hold an avionic device so that the avionic device can be engaged to an aircraft connector. Thus, the prior art illustrated in the application does not include the multiple connectors in the claimed configuration.

Accordingly, Applicant respectfully submits that independent Claim 9 is allowable over Monroe, even in combination with the AAPA. Therefore, dependent Claims 10-16 and 36 are also allowable for the same reasons. The various dependent claims also provide additional bases of distinction. For example, new Claim 36 recites that the first and second connectors are

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structured to releasably engage the aircraft connector and avionic device, respectively, such that the avionic device can be readily removed from the tray for retrofitting the aircraft, as shown in Figure 2. Monroe does not teach such a feature. Indeed, Monroe does not disclose any disconnection of the assembly 10 from the housing 18 and the components appear to be fixedly connected.

Independent Claim 17 as amended is directed to a communication network for communicating signals representative of electrical transmissions occurring between a plurality of avionic devices. Each expansion module includes connectors and an electrical circuit configured to transmit the electrical transmissions between the avionic device and the aircraft without substantially modifying the transmissions and generate and transmit a signal to the network, the signal being representative of at least one of the electrical transmissions between the avionic device and the aircraft. Thus, Claim 17 is allowable over Monroe for the same reasons as Claim 1, regardless of the application of the AIPA. Further, even if Monroe were modified to include multiple recorders, Monroe does not teach or suggest the use of multiple expansion modules for generating and transmitting signals to a single network.

For the reasons set forth above, Applicant respectfully submits that each of the pending Claims 1-7 and 9-36 is allowable over the cited references.

* * * *

CONCLUSIONS

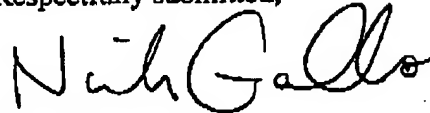
In view of the remarks presented above, Applicant submits that the present application is in condition for allowance. As such, the issuance of a Notice of Allowance is therefore respectfully requested. In order to expedite the examination of the present application, the Examiner is encouraged to contact Applicant's undersigned attorney in order to resolve any remaining issues.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required

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therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit
Account No. 16-0605.

Respectfully submitted,

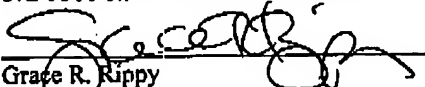


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